

EXHIBIT K

Memorandum and Report

To: Bureau of Alcohol, Tobacco, Firearms, and Explosives
From: Gabriel Hurst, Certified Prosthetist/Orthotist
Date: September 7, 2021
Re: **Factoring Criteria for Firearms with Attached “Stabilizing Braces,” Docket No. ATF 2021R–08, AG Order No. 5070–2021.**

My name is Gabriel Hurst and I am a Certified and Licensed Orthotist-Prosthetist. I have 23 years of experience in the field of Orthotics and Prosthetics. Throughout my career, I have worked with all types of patients. From the very young pediatrics to elderly.

In 2012, I began assisting Mr. Alex Bosco and SB Tactical in developing an Orthotic device that assisted in shooting firearms for those with limited strength and/or dexterity. Over the years, Mr. Bosco has worked with me to understand what some standards would be for a product to be considered an Orthotic device. It is my opinion that all of SB Tactical’s products not only meet those requirements, but their braces function as intended and designed.

I’ve worked with thousands of patients with varying degrees of functionality. I have designed countless Orthotic and Prosthetic devices. I can assert with all my experience that these products have changed in many ways over the years. Orthoses and prostheses have gone through a transformation in weight and size. Historically, products were big, bulky and far less adaptable/adjustable. Patients today experience a myriad of choices and options, including different materials, sizes and adjustability.

I am honored to have contributed to SB Tactical’s first brace, the SB15. It’s only normal that this product mirrors the design changes that my industry has seen. Revised versions of the original brace, including the SBA3 and the SB Mini, not only work as designed and intended but are a far superior product to the original in all categories of weight, size and adjustability.

There are various methods of using a stabilizing brace. These methods are very dependent on the ability or lack thereof of the user. With respect to disabled shooters in particular, it is obvious that shooting the types of firearms these products are attached to requires an unconventional firing stance as the shooters who are firing them need to adapt to the various disabilities they suffer from.

The SBA3 as with all of SB Tactical’s products are Orthotic devices. They function under the same concept as any other Orthotic brace. They are made up of a strap and a cuff made of an elastomer material. This idea is not a novel idea. The forearm crutch has been in use for close to 70 years. (See Figure 1.)

Figure 1



I was asked by counsel for SB Tactical to read the proposed rule and to evaluate the factoring criteria in proposed ATF Worksheet 4999.¹ In my opinion as an expert in the field of Orthotics/Prosthetics, the ATF has not fully considered the importance of these Orthotic devices to the people that require their use. Several of ATF's proposed factoring criteria are contrary to, or fail to take account of, the positions many shooters take when enjoying the firearms that they choose to purchase, including disabled shooters. Put differently, ATF's evaluation of what aspects of braces are effective from an Orthotics standpoint (i.e., "use as a brace") is substantially flawed.

Weapon Weight and Weapon Length: The proposed factoring criteria would effectively limit the use of stabilizing braces to weapons that weigh more than 4lbs but less than 7.5lbs, and that are between 12 and 26 inches in overall length. These criteria appear based on a misunderstanding of how a stabilizing brace is intended to function as an Orthotic device. They also fail to account for varying strength and agility levels among that public that may differ from the strength and agility levels of the average ATF agent.

I have seen individuals in my career who could benefit from using a stabilizing brace with a weapon that is outside the ranges the proposed rule would establish. There are many relevant factors to consider. For example, on average, females tend to have less upper body strength than males and may require additional assistance at lower weights to extend a heavy object from the body. Age is also a factor, as youths and elderly persons will typically require more assistance than persons of median age. Additionally, individual factors, such as body type and fitness level are also relevant.

Disability also plays an important role. Patients with cervical injuries often times present with weakness. Other examples are patients with upper extremity deformities or injuries. By limiting the use of stabilizing braces to weapons between 4 and 7.5lbs and between 12 and 26 inches, ATF will exclude many individuals who in my professional opinion could benefit from using a brace with weapons outside these ranges. This unfairly would discriminate against patients with disabilities.

Another reason for ATF's misjudgment appears to be its assumption that braced weapons will always be fired with one hand. But it is not realistic to believe that someone with limited functionality or with less strength would fire such a weapon with one hand. I am someone who has enjoyed shooting and who has seen those with limited functionality shoot these weapons. A

¹ Factoring Criteria for Firearms With Attached "Stabilizing Braces," 86 Fed. Reg. 30826 (June 10, 2021).

common position taken to fire this type of weapon is to fire from the hip. When firing from the hip, the weapon sits low and the arm is at an angle allowing for the brace to absorb the recoil. Notice in the photo below that the angle follows the natural position of the arm in this firing position and the area that is circled is not being pressed upon. (See Figure 2.)



Figure 2 also illustrates the usefulness of the stabilizing brace in maintaining a proper firing position with a weapon over 26 inches.

Other types of two-handed holds can also benefit from the stabilization that a properly fitted brace can provide using a two-handed hold. In Figure 3, the stabilizing brace enables the shooter to maintain proper firing position utilizing a two-handed hold despite the relatively large size of the pistol. (see Figure 3.)



ATF's focus on weapon length and weapon weight also appears to overlook that a principal purpose of a stabilizing brace is to distribute recoil, not to offset the weight or length of the weapon. Figure 4 depicts a shooter prior to the expulsion of a round. Figure 5 depicts the same shooter just after the round is expelled. Notice how the brace enables the shooter to manage the recoil and maintain a proper shooting position throughout the firing sequence.



Adjustability: The proposed rule and factoring criteria also appear to penalize stabilizing braces that are adjustable. ATF appears to view adjustability as an indication that a stabilizing brace will be used as a stock when, in fact, adjustability is common to many orthoses and prostheses, including the crutches referenced above. (Figure 1.)

Most commonly, these devices work by providing multiple adjustment points so that the Orthotic can be custom fitted to the individual even though it is not custom made for the individual. (Figure 6.)



Figure 6

Below are some other examples are shown. Figures 7, 8 and 9 show adjustable uprights and struts to accommodate different size patients.



Figure 7



Figure 8



Figure 9

Pistol stabilizing braces work on a similar principle. Different persons have different body types and different levels of ability. These persons require braces of varying lengths to allow the brace to function properly. Adjustability permits a stabilizing brace to accommodate different body types as well as the different firearms to which it may be attached.

For this reason, ATF is mistaken when it asserts that adjustability is not a key feature of a stabilizing brace “because a shooter merely requires a device that reaches from the back of the firearm to the forearm” and that little “variation exists between shooters in this way.”² To the contrary, for a brace to function well in distributing recoil and stabilizing the weapon it is critical that the brace reach the part of the forearm that has muscle for padding, and not fall at the wrist or in the elbow crease. The brace should be adjustable for comfort. For all the reasons described above, significant variation exists among shooters, making adjustability extremely helpful in fitting these devices for use as a brace.

Length of Pull: The proposed factoring criteria also penalizes stabilizing braces based on the “length of pull,” a measurement that ATF describes as “the distance between the trigger and the center of the shoulder stock.”³ According to the proposal, a length of pull greater than 10.5 inches suggests that the brace will be used as a stock, and a length of pull greater than 13.5 inches is conclusive proof that the brace will be used as a stock.⁴

As already explained, proper fitment of a stabilizing brace requires that it strike the forearm at the muscular region of the forearm. According to the literature, the mean forearm-hand length of an adult male is approximately 48.4 cm (19.07 in) and at the 99th percentile is approximately 54.2 cm (21.24 in).⁵ For females, the mean is approximately 44.29 cm (17.44 in) and the 99th percentile is approximately 49.81 cm (19.61 in).⁶ (See Table 1.)⁷

² 86 Fed. Reg. at 30833.

³ 86 Fed. Reg. at 30833.

⁴ 86 Fed. Reg. at 30833.

⁵ Gordon, Claire C. et. al *1988 Anthropometric Survey of U.S. Personnel: Summary Statistics Interim Report*. March 1989, available at <https://multisite.eos.ncsu.edu/www-ergocenter-ncsu-edu/wp-content/uploads/sites/18/2016/06/Anthropometric-Detailed-Data-Tables.pdf>.

⁶ *Id.*

⁷ *Id.*

4/21/06

Forearm-Hand Length

FEMALE N = 2208			MALE N = 1774		
Centimeters		Inches	Centimeters		Inches
44.29	Mean	17.44	48.40	Mean	19.06
2.34	Std Dev	.92	2.33	Std Dev	.92
54.60	Maximum	21.50	57.80	Maximum	22.76
32.40	Minimum	12.76	38.60	Minimum	15.20
Percentiles			Percentiles		
39.14	1 st	15.41	43.43	1 st	17.10
39.74	2 nd	15.65	43.98	2 nd	17.31
40.12	3 rd	15.79	44.32	3 rd	17.45
40.62	5 th	15.99	44.79	5 th	17.63
41.38	10 th	16.29	45.52	10 th	17.92
41.91	15 th	16.50	46.02	15 th	18.12
42.32	20 th	16.66	46.42	20 th	18.28
42.69	25 th	16.81	46.78	25 th	18.42
43.02	30 th	16.94	47.10	30 th	18.54
43.33	35 th	17.06	47.41	35 th	18.66
43.63	40 th	17.18	47.70	40 th	18.78
43.92	45 th	17.29	47.99	45 th	18.89
44.21	50 th	17.41	48.28	50 th	19.01
44.51	55 th	17.52	48.58	55 th	19.12
44.81	60 th	17.64	48.88	60 th	19.24
45.13	65 th	17.77	49.20	65 th	19.37
45.47	70 th	17.90	49.53	70 th	19.50
45.84	75 th	18.05	49.91	75 th	19.65
46.26	80 th	18.21	50.33	80 th	19.82
46.74	85 th	18.40	50.83	85 th	20.01
47.35	90 th	18.64	51.46	90 th	20.26
48.25	95 th	18.99	52.42	95 th	20.64
48.81	97 th	19.22	53.04	97 th	20.88
49.21	98 th	19.38	53.49	98 th	21.06
49.81	99 th	19.61	54.20	99 th	21.34



Table 1

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The obvious conclusion is that for a significant portion of the population a length of pull of 13.5 inches is fully consistent with use as a brace and will cause the brace to fit the forearm correctly and provide stabilization. Accordingly, in my professional opinion it is unreasonable for ATF to conclude that a device with these measurements cannot be used as a brace. For the same reason, it is also unreasonable for ATF to conclude that a “length of pull” between 10.5 inches and 13.5 inches suggests that the device will not be used as a brace.

* * *

It is my hope that the ATF will take these facts into account when considering the proposed rule and factoring criteria.

Respectfully,

/s/ Gabriel Hurst

Gabriel Hurst, Certified/ Licensed Prosthetist/Orthotist